

### CLOSURE & POST CLOSURE PLANS

This plan covers the plant's registered RCRA containment facility.

This facility is used primarily for the holding of VSB (a by-product of the manufacture of Vanillin), mineral oil containing phenolics and other plant strainer and autoclave solids. VSB and mineral oil are the only materials in the facility which are classified as dangerous or extremely hazardous wastes by state RCRA definitions.

The maximum levels of material which are inventoried on the containment facility are:

VSB	50 Tons
MINERAL OIL	20 Tons
STRAINER & AUTOCLAVE SOLIDS	5 Tons

#### Termination of Facility Use (Closure)

The enacting of this plan will occur when the current operation of the Monsanto Seattle site is terminated. Specifically, the actions to be taken upon termination will occur within 90 days of receipt of the final volume of material on to the facility.

It is the intent of the plant to close its RCRA site via:

1. Removal of all stored material to an approved hazardous landfill site.
2. The site will be flushed of all remaining residue which should be recycled to the current by-product tanks or to a tank truck for disposal at an approved hazardous landfill site.
3. The site drain water shall be tested for parameters to determine whether the facility is cleaned to the point of removing any residual hazardous material.

Indicating parameters of contamination are as listed in Section 265.92(b)(3).

- 1) pH
  - 2) Specific Conductance
  - 3) Total Organic Carbon
  - 4) Total Organic Halogen
4. If the site is deemed to be free of potential parameters for groundwater contamination, then post-closure procedures should be followed.
  5. If the site is deemed to have the potential for groundwater contamination, then the site should be physically removed and disposed of at an approved hazardous landfill site.

The anticipated timing for closure would occur in approximately 20 years. The timing for the closure procedure is estimated to take 2-3 months.

When closure is completed, certification of this must be made by Monsanto and an independent registered engineer to the Regional Administrator.

-2-

### Post Closure

The enacting of this plan will occur when the closure plan has been completed.

Upon engineering evaluations, appropriate monitoring wells will be installed. These will include as a minimum, one upgradient well and three downgradient wells.

The upgradient well shall be used to determine background levels of water quality parameters in accordance with Section 265.92(b)(2) & (3) lists.

- |              |                           |
|--------------|---------------------------|
| 1) Chloride  | 6) Sulfate                |
| 2) Iron      | 7) pH                     |
| 3) Manganese | 8) Specific Conductance   |
| 4) Phenols   | 9) Total Organic Carbon   |
| 5) Sodium    | 10) Total Organic Halogen |

The downgradient well shall be used to determine if ground water contamination has occurred, via monitoring of contaminants listed in Section 265.92(b)(3).

- 1) pH
- 2) Specific Conductance
- 3) Total Organic Carbon
- 4) Total Organic Halogen

For each parameter listed in Section 265.92(b)(3) at least four replicate measurements must be obtained for each sample and the initial background arithmetic mean and variance must be determined by pooling the replicate measurements for the respective parameter concentrations or values in samples obtained from upgradient wells during the first year.

If after the initial monitoring is done, it is determined that no hazardous waste or hazardous waste constituents have entered the ground water, then future monitoring will include an annual sampling of downgradient wells for 2 years to ensure the integrity of the ground water from contamination from the site.

If after monitoring is done it is determined that hazardous material may have entered the ground, then appropriate treatment of the ground should be undertaken.

Long term future contact concerning this site is the

Monsanto Company  
800 N. Lindbergh Blvd.  
St. Louis, MO 63166

Tel. #314/694-1000

Attn: MIC Manager, Environmental Protection

Within 90 days after closure is completed, a survey plat indicating the location and size of the site will be submitted to the Regional Administrator and Local Land Authority.

-3-

These closure & post closure plans are to be submitted to the Regional Administrator of the EPA at least 180 days prior to the initiation of closure of the site.

NOTE: Sections 265.140 through 265.152 concerning financial requirements are handled on a company level.

M. N. Miller  
TSD Superintendent

5/15/81

EXHIBIT 1

using Achroma Oil No. 6 from Tidewater Associated Oil Company. Data from the ASTM distillation of the cut of Mineral Seal Oil and Achroma Oil are:

	<u>Cut of Mineral Seal Oil</u>	<u>Achroma Oil</u>
IBM	505°F.	496°F.
50% distilled	538	538
90% distilled	591	582
E.P.	633	628

As all of the Achroma oil is usable, it is really preferable to the originally chosen oil.

An oil of narrower boiling range, say, from 500 to 560°F., would be preferred, but such an oil has not been obtainable.